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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
MYERS, CARLA J	
ART UNIT	**PAPER NUMBER**
1634	

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/056,749	SPINDLER, STEPHEN R.	
	Examiner	Art Unit	
	Carla Myers	1634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10/24/05 aand 11/18/05*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *29-34 and 44-47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *29-34 and 44-47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10/24/05* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/24/05*.
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. 12/28/05
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to the amendment filed October 24, 2005. Applicant's arguments have been fully considered but are not persuasive to overcome all grounds of rejection. All rejections not reiterated herein are hereby withdrawn. This action contains new grounds of rejection necessitated by Applicant's amendments to the claims. This action is made final.

Inventorship

2. In view of the papers filed November 18, 2005, it has been found that this nonprovisional application, as filed, through error and without deceptive intent, improperly set forth the inventorship, and accordingly, this application has been corrected in compliance with 37 CFR 1.48(a). The inventorship of this application has been changed by the addition of inventor Joseph M. Dhahbi.

The application will be forwarded to the Office of Initial Patent Examination (OIPE) for issuance of a corrected filing receipt, and correction of Office records to reflect the inventorship as corrected.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 29, 33, 34, and 44-47 are rejected under 35 U.S.C. 102(e) as being anticipated by Weindruch et al (U.S. Patent No. 6,569,624).

Weindruch discloses a method comprising determining the gene expression profiles of each of: a mammal at 5 months (i.e., a young mammal); a mammal at 30 months (i.e., an old mammal or a mature mammal); a caloric-restricted mammal at 5 months; and a caloric-restricted mammal at 30 months; and comparing the gene expression profiles in order to identify changes in the gene expression profiles (see, e.g., columns 7, 8 and 10). In particular, the mammals are mice (column 7). The mice were acquired at 1.5 months of age and housed for one week prior to providing the mice with either a control or caloric-restricted diet. Thereby, the mice are considered to have been subjected to a period of caloric restriction that is post-weaning and less than life-long. Weindruch provides the results of the comparison of 5 month old and 30 month old control and caloric-restricted mice in Tables 1, 2, 5, 6, 9 and 10 and the comparison of the gene expression profile of age matched control and caloric-restricted mice in Tables 3, 4, 7 and 8. The comparison method of Weindruch necessarily results in the identification of changes in the profile which occur between the age matched caloric-restricted and control mice, the changes that occur in both the young and old caloric-restricted mice, and the changes that occur only in the young or only in the old caloric-restricted mice (see especially Tables 3-6). Thereby, Weindruch teaches each of the process steps and each of the outcomes of the present claims. Further, at column 7, Weindruch states "(i)n the process we have discovered a gene expression profile that is

specifically associated with caloric restriction. We believe this profile provides genetic markers for this metabolic state."

RESPONSE TO ARGUMENTS:

In the response filed October 24, 2005, Applicants state that priority is claimed to a document prior to the filing date of the Weindruch patent, and thereby the Weindruch patent is not prior art to the claimed invention. However, the '224 application to which priority is claimed does not provide support for the claimed invention in which a biomarker of caloric restriction is identified by comparing a gene expression profile from a caloric-restricted mammal to a gene expression profile from a control mammal of the same age and to a long term caloric-restricted mammal and identifying changes in the gene expression profile that occur in the caloric-restricted mammal relative to the control mammal and which "correlate" with changes in the gene expression profile of the long term caloric restricted animal. Accordingly, Applicants are granted priority only to the filing date of 8/25/200 and thereby the Weindruch patent is prior art to the claimed invention.

Applicants further traverse this rejection by stating that it is clear from the specification that "the terms 'lifelong' and 'long term calorie restriction' are used interchangeably to refer to calorie restriction that is imposed for most of the animals life." Applicants cite Lee as teaching a study in which animals spent "most of their lifetime" on a calorie restricted diet. Applicants conclude that one would thereby assign a definition to long term calorie restriction to be limited to a time period in which animals spend "most of their lives" on a calorie restricted diet. These arguments have been fully

considered but are not persuasive. The specification as originally filed does not provide this definition for the phrase "long term calorie restriction." Further, the cited reference provides only an example of what might be encompassed by this phrase. The cited reference does not provide evidence that those of ordinary skill in the art would recognize that this phrase was intended to have a definition of "most of an animals life." Further, there is no definition in the specification for what would be encompassed by "most of an animals life." Applicants further cite page 55, lines 28-30 as evidence that "long-term treatment is also referred to as lifelong caloric restriction." (NOTE: the cited pages refer to the pages of the originally filed specification. A substitute specification was filed on 8/30/02. Future references to the specification should be made in the context of the current specification). However, page 55 states that "Even rarer are instances in which life-long CR prevents these changes." This statement does not provide a definition for long term calorie restriction and particularly does not impart a definition onto this phrase as meaning "a regimen in which animals spend most of their lives on a calorie restricted diet." In the method of Weindruch animals are in fact subjected to CR for a period that is "less than life-long" since Weindruch teaches that animals are placed on the CR diet one week after being received at 1.5 months (col. 8).

At page 12 of the response, it is stated that "(i)n the instant application, mammals are subjected to short-term calorie restriction in which treatment is less than lifelong and the animal spends more time on a normal diet than a calorie restricted diet." However, the claims do not recite this limitation and thereby Applicants are arguing limitations that are not recited in the claims.

Applicants further argue that Weindruch describes changes in young versus mature mice, but does not disclose calorie restriction of young animals, only mature animals. This argument has been fully considered but is not persuasive. It is first noted that claims 29-34 do not require young calorie-restricted animals. Further, Weindruch does teach young CR restricted animals. In particular, Weindruch teaches "gene expression profiling of over 6300 genes in skeletal muscle, neocortex muscle, and cerebellum tissue and 19,000 genes in skeletal muscle and heart tissue of 5-month and 30-month old mice" (col. 7, lines 21-32). The reference states that mice were purchased at 1.5 months of age and provided a non-purified diet for one week, and then broken up into two groups, with one group receiving the control diet and the second receiving a 26% calorie-reduced diet (col. 7, lines 55-65 to col. 8, lines 1-10). After treatment, "each 5-month-old mouse was compared to each 30-month old mouse" (col. 10).

4. Claims 29, 33, 34, and 44-47 are rejected under 35 U.S.C. 102(b) as being anticipated by Mote (Journal of Gerontology. 1991. 46: B95-100).

Mote discloses a method comprising determining the gene expression profiles of each of: a mammal at 4-5 months (i.e., a young mammal); a mammal at 16-17 months (i.e., a "middle" aged mammal), a mammal at 30-31 months (i.e., an old mammal or a mature mammal); a caloric-restricted mammal at 4-5 months; a caloric-restricted mammal at 16-17 months; and a caloric-restricted mammal at 30-31 months; and comparing the gene expression profiles in order to identify changes in the gene expression profiles (see, e.g., page B97). In particular, the mammals are mice (page B97). The mice were weaned at 21-24 days and then subjected to one of three diet

regimens: fed ad libitum (AL or control), fed a 20% caloric-restricted diet or fed a 52% caloric-restricted diet (page B96). Thereby, the mice are considered to have been subjected to a period of caloric restriction that is post-weaning and less than life-long. Mote provides the results of the comparison of 4/5 month old, 16/17 month old and 30/31 month old control and caloric-restricted mice (see B97-B98). Mote found that, for example, the level of P_3-450 increased in both old and young mice fed a CR diet versus control old and young mice (see, e.g., Figure 2). The reference also teaches that caloric restriction increased catalase activity in both young and old mice (Table 2 and page B98). Accordingly, Mote teaches methods which identify a change in gene expression which occurs in CR mice versus control mice and which occurs in both young and old CR mice. Further, Mote teaches that the level of P_1-450 increased in old mice fed a CR diet versus control young mice, but did not significantly change in young mice given a 52% CR diet versus control young mice (see, e.g., Figure 1). Accordingly, Mote teaches a methods which identifies a change in gene expression which occurs in old CR mice versus control mice, but does not substantially occur in young CR mice versus young control mice. Mote also found that MnSOD mRNA levels increased specifically in old CR mice versus old control mice (see Figure 3). The comparison method of Mote necessarily results in the identification of changes in the profile which occur between the age matched caloric-restricted and control mice, the changes that occur in both the young and old caloric-restricted mice, and the changes that occur only in the young or only in the old caloric-restricted mice . Mote teaches each of the process

steps and each of the outcomes of the present claims and thereby anticipates the claimed invention.

RESPONSE TO ARGUMENTS:

In the response, Applicants traverse this rejection by arguing that Mote does not teach that the animals are subjected to a period of calorie restriction that is less than life long. This argument has been fully considered but is not persuasive because Mote teaches that the animals are weaned at 21-24 days, then subjected to a caloric-restricted diet and analyzed at 4-5 months, at 16-17 months, and at 30-31 months. Since the calorie-restricted diet does not begin until after 21-24 days, the animals are subjected to a period of caloric restriction that is less than life-long.

Applicants further assert that Mote does not disclose that changes in gene expression profiles were observed with calorie-restriction in young animals versus animals of the same age and states that the mRNA levels of P_1-450, P_3-450, SOD and catalase in young animals subject to different dietary regimens were not statistically significant. This argument has been fully considered but is not persuasive because the present claims do not require the identification of a gene that shows a statistically significant difference in expression levels. Rather, the claims require only a step of identifying changes in the gene expression profiles between test caloric-restricted animals and control animals of the same age. Further, Mote does teach a statistically significant change in the level of gene expression between young CR mice and young control mice. For instance, Figure 2 shows that the level of P_3-450 increased in both old and young mice fed a CR diet, but did not increase in control old and young mice. That

is, the expression level of P_3-450 was the same for young CR and old CR mice (both with a bar letter of "a"), while the expression level of P_3-450 in young CR mice was higher than that of young control mice (with a bar letter of "a" for the young CR and a bar letter of "abc" for the young control mice, thus showing a statistically significant change in the level of expression).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weindruch in view of Tillman et al. (The Journal of Biological Chemistry. 1996. 271: 3500-3506) and Chu (Mechanisms of Ageing and Development. 1996. 87: 25-33).

The teachings of Weindruch are presented above. Weindruch teaches that the period of caloric restriction extends from 7 weeks to 5 months or 30 months. Weindruch does not teach that the period of caloric restriction is limited to 6 weeks, 2 weeks or 2 days or less.

However, Chu teaches the importance of analyzing the effects of short term CR on the level of gene expression. Chu teaches that gastrin mRNA levels decrease with age and that this effect is augmented by a short term CR diet of 8 weeks (see abstract and page 29). After 8 weeks of CR, gastrin mRNA decreased in the aged rats but remained relatively constant in the young (3 month old) rats (page 29). The reference

(page 33) states that "(l)ife-long CR is the only known experimental manipulation that can reverse or retard the deleterious effects of the aging process." Chu (page 33) concludes that "age-related changes cannot be anticipated; the actual experiment in this case, defining the molecular changes of various gut hormones, must be done in a systematic fashion."

Further, Tillman teaches methods which compare gene expression patterns in CR and control mice. Tillman (page 3501) studied the effects of short term dietary changes in gene expression and specifically compared mice fed ad libitum for 1 week with mice that were maintained on a caloric-restricted diet. The reference reports that "After only 1 week, cpsI mRNA levels were twice as high in CR mice ($p < 0.001$), even though protein consumption per gram (body weight) was 10% lower in the CR group (Table II). These results are consistent with those of the long term diet studies, suggesting that cpsI gene expression is induced by reduction in dietary calories and not by changes in the amount of protein consumed. Thus, protein metabolism and cpsI gene expression adjust rapidly to shifts in the amount of calories consumed." Tillman also notes CR delays age-related physiological changes, increases maximum life span and reduces cancer incidence (see abstract).

In summary, both Chu and Tillman teach that long term CR is known to reverse or delay age-related physiological changes. Both references also teach that short-term CR effects gene expression. In view of the teachings of Chu and Tillman, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of Weindruch so as to have administered the CR diet for

shorter periods of time, including time periods of less than 6 weeks, 2 weeks or 2 days in order to have studied the short-term effects of CR on gene expression. The ordinary artisan would have been motivated to have done so in order to have further studied the mechanism by which CR effects gene expression and protein activity (e.g., mRNA levels, protein levels, mRNA stability, post-transcriptional and post-translation processing etc). Additionally, the ordinary artisan would have been motivated to performed the CR for periods of less than 6 weeks, 2 weeks or 2 days in order to identify those genes which were equally effected by short term and long term CR in order to aid in the development of compounds which mimic the effects of CR and help to reverse the effects of aging and increase long term survival and to further elucidate the mechanism by which short and long term CR effect age-related physiological changes.

RESPONSE TO ARGUMENTS:

In the response, Applicants argue that Chu teaches that short term calorie restriction augments the effects of aging and therefore one would not expect that short-term calorie restriction would be an effective treatment regimen for obtaining biomarkers. It is further argued that Tillman teaches only that changing the diet of a long term calorie restricted mouse after a week changes cpsI mRNA levels. Applicants state that the cited references do teach that short term calorie restriction mimics long term calorie restriction.

Applicant's argument have been fully considered but are not persuasive because there is no requirement for the prior art to teach that short term calorie restriction mimics

long term calorie restriction in order to render the claimed invention obvious. The claims are drawn to methods which identify biomarkers of calorie restriction. There are no recitations in the claims which require the identification of a biomarker of short term calorie restriction which mimics long term calorie restriction. The prior art when considered as a whole provides the necessary motivation to modify the method of Weindruch so as to assay for a change in gene expression in animals which have been subjected to short term CR. In particular, Chu exemplifies methods in which animals treated with short-term CR are analyzed for a change in the level of expression of gastrin. Chu teaches that "(l)ife-long CR is the only known experimental manipulation that can reverse or retard the deleterious effects of the aging process" and that "age-related changes cannot be anticipated; the actual experiment in this case, defining the molecular changes of various gut hormones, must be done in a systematic fashion." Thereby, Chu teaches that only by studying gene expression at different periods of time of CR can one determine the effect of CR on the gene expression levels. Tillman was cited for teaching that gene expression of cpsI was effected by both short term (1 week) and long term CR. Thereby, Tillman also provides the motivation to assay for the effect of CR on gene expression at short term and long term intervals of CR in that Tillman teaches that a difference of 1 week of a CR diet effected expression levels of cpsI. Accordingly, the prior art when considered as a whole teaches that short term CR may have similar or distinct effects on gene expression when compared to long term CR. Therefore, the prior art provides the motivation to obtain and a reasonable expectation of success of practicing a method of identifying biomarkers of calorie restriction by

assaying for gene expression levels in mammals that have been subjected to CR for a period of 6 or 2 weeks or 2 days or less.

6. Claims 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mote in view of Tillman et al. (The Journal of Biological Chemistry. 1996. 271: 3500-3506) and Chu (Mechanisms of Ageing and Development. 1996. 87: 25-33).

The teachings of Mote are presented above. Mote teaches that the period of caloric restriction extends from approximately 1 month to 4/5 months, 16/17 months and 30/31 months. Mote does not teach that the period of caloric restriction is limited to 6 weeks, 2 weeks or 2 days or less.

However, Chu teaches the importance of analyzing the effects of short term CR on the level of gene expression. Chu teaches that gastrin mRNA levels decrease with age and that this effect is augmented by a short term CR diet of 8 weeks (see abstract and page 29). After 8 weeks of CR, gastrin mRNA decreased in the aged rats but remained relatively constant in the young (3 month old) rats (page 29). The reference (page 33) states that "(l)ife-long CR is the only known experimental manipulation that can reverse or retard the deleterious effects of the aging process." Chu (page 33) concludes that "age-related changes cannot be anticipated; the actual experiment in this case, defining the molecular changes of various gut hormones, must be done in a systematic fashion."

Further, Tillman teaches methods which compare gene expression patterns in CR and control mice. Tillman (page 3501) studied the effects of short term dietary changes in gene expression and specifically compared mice fed ad libitum for 1 week

with mice that were maintained on a caloric-restricted diet. The reference reports that "After only 1 week, cpsI mRNA levels were twice as high in CR mice ($p < 0.001$), even though protein consumption per gram (body weight) was 10% lower in the CR group (Table II). These results are consistent with those of the long term diet studies, suggesting that cpsI gene expression is induced by reduction in dietary calories and not by changes in the amount of protein consumed. Thus, protein metabolism and cpsI gene expression adjust rapidly to shifts in the amount of calories consumed." Tillman also notes CR delays age-related physiological changes, increases maximum life span and reduces cancer incidence (see abstract).

In summary, both Chu and Tillman teach that long term CR is known to reverse or delay age-related physiological changes. Both references also teach that short-term CR effects gene expression. In view of the teachings of Chu and Tillman, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of Mote so as to have administered the CR diet for shorter periods of time, including time periods of less than 6 weeks, 2 weeks or 2 days in order to have studied the short-term effects of CR on gene expression. The ordinary artisan would have been motivated to have done so in order to have further studied the mechanism by which CR effects gene expression and protein activity (e.g., mRNA levels, protein levels, mRNA stability, post-transcriptional and post-translation processing etc). Additionally, the ordinary artisan would have been motivated to have performed the CR for periods of less than 6 weeks, 2 weeks or 2 days in order to identify those genes which were equally effected by short term and long term CR in

order to aid in the development of compounds which mimic the effects of CR and help to reverse the effects of aging and increase long term survival and to further elucidate the mechanism by which short and long term CR effect age-related physiological changes.

RESPONSE TO ARGUMENTS:

In the response, Applicants argue that one would not have been motivated to have modified the method of Mote so as to have administered the CR diet for shorter periods of time.

Applicant's argument have been fully considered but are not persuasive because the prior art when considered as a whole provides the necessary motivation to modify the method of Mote so as to assay for a change in gene expression in animals which have been subjected to short term CR. In particular, Chu exemplifies methods in which animals treated with short-term CR are analyzed for a change in the level of expression of gastrin mRNA. Chu teaches that "(l)ife-long CR is the only known experimental manipulation that can reverse or retard the deleterious effects of the aging process" and that "age-related changes cannot be anticipated; the actual experiment in this case, defining the molecular changes of various gut hormones, must be done in a systematic fashion." Thereby, Chu teaches that only by studying gene expression at different periods of time of CR can one determine the effect of CR on the gene expression levels. Tillman was cited for teaching that gene expression of cpsI was effected by both short term (1 week) and long term CR. Thus, Tillman also provides the motivation to assay for the effect of CR on gene expression at short term and long term intervals of CR in that

Tillman teaches that a difference of 1 week of a CR diet effected expression levels of cpsI. Accordingly, the prior art when considered as a whole teaches that short term CR may have similar or distinct effects on gene when compared to long term CR. Therefore, the prior art provides the motivation and reasonable expectation of success of practicing a method of identifying biomarkers of calorie restriction by assaying for gene expression levels in animals that have been subjected to CR for a period of 6 or 2 weeks or 2 days or less.

THE FOLLOWING ARE NEW GROUNDS OF REJECTION NECESSITATED BY APPLICANT'S AMENDMENTS TO THE CLAIMS:

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 29-34 and 44-47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 29-34 and 44-47 are indefinite over the recitation of "that correlate with changes in the gene expression profile from the long term calorie-restricted mammal" because it is not clear as to what is intended to be meant by this phrase. This phrase is not defined in the specification and there is no art recognized definition for what is intended to be meant by gene expression profiles or changes in gene expression profiles that correlate with one another. It is unclear as to whether the changes that correlate with one another include only changes in which there is an identical change in

the level of gene expression, or an undefined similar change in the level of gene expression (e.g., an increase or decrease in expression levels by 10%, 25%, 50%, 90% etc) or whether the changes correlate with one another in some other unspecified manner. Accordingly, one cannot determine the meets and bounds of the claimed invention.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

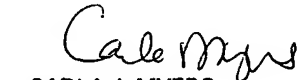
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carla Myers whose telephone number is (571) 272-0747. The examiner can normally be reached on Monday-Thursday from 6:30 AM-5:00 PM. A message may be left on the examiner's voice mail service. If attempts to reach

the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Jones, can be reached on (571)-272-0745.

The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866)-217-9197 (toll-free).

Carla Myers
December 28, 2005



CARLA J. MYERS
PRIMARY EXAMINER